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IN SCHOOL CAPS AND TIES, ENGLISH SCHOOLBOYS GATHER AROUND A GLOBE FOR A GEOGRAPHY LESSON

These eager, smiling students attend the Edward VI Grammar School in the town of Bury St. Edmunds, 65 miles northeast of London. England's famous schools, through the centuries, have done much to shape the development of the "British Way" (Bulletin No. 3).

Bulletin No. 1, May 2, 1949

Lake Geneva Waters Sink to Near-Record Low

EUROPE'S drought has hit the Lake of Geneva. Swiss observers report that the water level of Europe's largest lake has dropped nearly to the lowest mark recorded in a century. Along the edge of the shore rocks unseen for decades project eroded surfaces above the water.

However, as long as the River Rhône flows through the lake from east to west, the 45-mile-long blue crescent on the French-Swiss border is unlikely to shrink more than a small fraction of its total volume.

Rhône Supplies Two-Thirds of Lake's Water

Famous for its rugged Alpine setting and the numerous international conferences held there, the lake fills a vast rock canyon. Its greatest depths measure more than 1,000 feet. In contrast, a few miles south of its shores the Alps' highest mountain peak, Mont Blanc, towers 15,781 feet. Lake Geneva is 1,228 feet above sea level.

The Rhône, born in the melting ice of a massive glacier in the Swiss Alps 6,000 feet above sea level, drops almost a mile in its tortuous 110-mile course to Lake Geneva. Cascading down steep valleys, it becomes gray with silt as tributaries add to its size. The Rhône's flow normally provides about two-thirds of the lake's water supply.

As the waters move the curving length of the lake, silt settles to the bottom. When the Rhône flows out of the lake (illustration, next page) under the arches of the seven bridges of the city of Geneva (Genève), it is as clear and blue as the lake.

Geneva is Switzerland's most famous city, although Zürich is the largest and Bern is the nation's capital. Renowned as headquarters of the International Red Cross (which was organized there) and the International Labor Office, it was for nearly thirty years the seat of the League of Nations.

Other celebrated conferences cities—Nyon, Lausanne, and Montreux—rise on the hillslopes of the north shore, eastward from Geneva. At the far eastern end the Castle of Chillon rises on a rocky offshore island. In its cheerless dungeon Bonivard, Lord Byron's "Prisoner of Chillon," was "held in durance vile."

Ancient Name Was Lemanus

At Rolle, Morges, Vevey, and other lakeside towns picturesque old castles, modern villas, and resort hotels cluster on wooded hillsides or perch on rocky isles or promontories.

Caesar referred to the lake as Lemanus. It is still Lac Léman to the French. Two-fifths of the lake belongs to France.

Periods of low water have revealed something of the ancient life of the region. For 35 centuries in the Polished Stone Age and the Bronze Age, men lived in dwellings built on piles along the edge of the lake. Near the city of Geneva such piles have been discovered. In spite of their great

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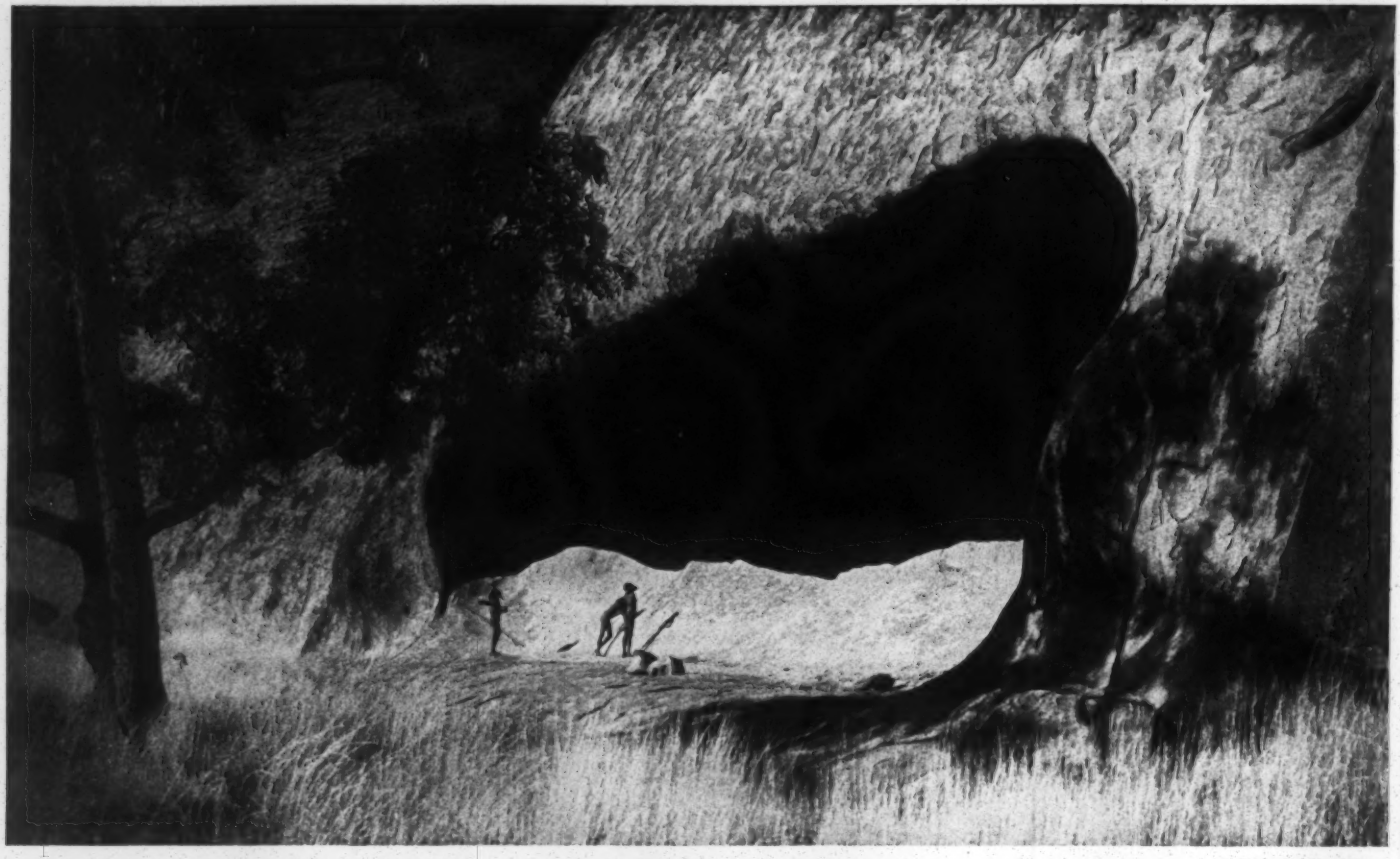

CHARLES P. MOUNTFORD

AUSTRALIAN ABORIGINES COME OFTEN TO THE SACRED CAVE IN AYERS ROCK; THEY BELIEVE ITS CARVER WAS THE LEGENDARY MOLE, ITJARITJARI

The walls of the cave are covered with crude drawings which show tribal traditions. Ayers Rock, about two miles across and 1,110 feet high, rises abruptly out of the arid central Australian regions to be crossed by a range for testing rockets (Bulletin No. 2).

Australia Deserts to Serve as Rocket Range

AUSTRALIA'S barren "outback" has a purpose to serve at last. Official reports of a construction speed-up on a rocket-launching site in the State of South Australia hint at early use of a rocket range stretching northwest nearly 1,300 miles across Sahara-like sands to the shores of the Indian Ocean.

Spurred by memory of invasion threats early in World War II, defense planners for the commonwealth continent in 1945 conceived the outback rocket-range plan. In mid-1947 construction started in a 3,000-square-mile zone set apart for rangehead use, centered at Mount Eba at the southern end of Stuarts Range.

Continent's Central and Northwest Areas Are Arid

Mount Eba lies 370 miles northwest of Adelaide. About 100 miles nearer to the South Australia capital is Woomera. Two years ago this hamlet consisted of a half dozen shacks, but today it is shaping into a complete town for 1,500 rocket-experimentation workers and their families. A six-mile rail spur now connects it with Pimba on the Trans-Australian Railway.

Australia compares with the United States in land area. Counting only 7,000,000 people, it offers colonization room. Experts place its population ceiling at about 30,000,000, however, because of the vast arid areas in its center and northwest.

Behind the coastal cities and towns in the east, southeast, and southwest lies the belt of fertile grainland that has made Australia famous for wheat. Further inland are stretches of sheep- and cattle-raising country. Nowhere, however, can one go more than a few hundred miles inland without finding that the grazing land has thinned down to barren desert.

Mount Eba is a northern outpost of South Australia's cattle lands. Rainfall in the region is Australia's lowest—five to eight inches a year. Some water can be coaxed from wells drilled down 100 feet or more. For the new Woomera community, however, water will be piped from the Murray River, 240 miles southeast.

Aborigines Face Displacement

Along the designated rocket-range corridor, 200 miles wide and 1,270 miles northwestward to the Indian Ocean coast, nature's desolation is extreme. The range edges the Great Victoria Desert, crosses the Gibson Desert, and then traverses the Desert Artesian Basin which borders the Indian Ocean between Port Hedland and Broome. Phosphate-rich Christmas Island, far out toward Java, may eventually be a target 2,800 miles from the launching base. It is owned by Great Britain.

In the land-corridor, about equal to that of Texas, perhaps 1,500 dark-skinned aborigines dwell. They may constitute a displaced-persons problem (illustration, inside cover).

Charles P. Mountford, Adelaide ethnologist, studying a tribe of 300 inhabitants of the aboriginal reserve in the corner where South Australia,

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age they were so well preserved that archeologists have been able to reconstruct replicas of the villages of this prehistoric era.

Lake Geneva interests scientists because of its occasional *seiches.* A seiche (pronounced saysh) is a stationary wave or seesaw motion of the body of water as a whole. Seiches are most often observed in almost-landlocked ocean bodies such as San Francisco Bay and Honolulu harbor. They may be started by heavy winds or distant earthquakes, but their continuance and period of oscillation depend on the length, width, and depth of water in the bay.

In Lake Geneva, seiches cause "tides" of as much as six feet, sometimes lengthwise, sometimes crosswise. They are believed to be started by sudden variations in atmospheric pressure on parts of the lake surface.

NOTE: Lake Geneva appears on the National Geographic Society's map of Europe and the Near East. Write the Society's headquarters, Washington 6, D.C., for a price list of maps.

See also "Swiss Cherish Their Ancient Liberties," in the *National Geographic Magazine* for April, 1949*; "Lake Geneva: Cradle of Conferences," December, 1937; and "August First in Gruyères," August, 1936. *(Issues marked with an asterisk are included on a special list of Magazines available to teachers in packets of ten for $1.00.)*

AD ASTRA-AERO

AT LAKE GENEVA'S NARROWED WESTERN END THE RHONE RIVER CONTINUES ITS SEAWARD COURSE UNDER THE BRIDGES THAT CONNECT THE SEVERED PARTS OF GENEVA CITY

TEACHERS! Do you leaf aimlessly through your *National Geographic Magazines*, looking for that article on Greece, those color pictures of Guatemalan costumes? Save time. Order the new Cumulative Index, 1899-1947 inclusive. $2.50.

Bulletin No. 3, May 2, 1949

Magazine Portrays Britain's Gifts to World

SOME 100,000 of the 1,800,000 members of the National Geographic Society—those who live in Great Britain (illustration, cover) and Northern Ireland—are finding the April, 1949, *National Geographic Magazine* more than usually interesting. Also, American schoolteachers are foremost among groups in the United States which have praised the issue for advancing cultural understanding among nations.

The Magazine's 132 editorial pages are devoted to the story of Great Britain's contribution to Western civilization—from Caesar's time down through World War II. The first and principal article of the issue, entitled "The British Way," is by Sir Evelyn Wrench of Marlow, Buckinghamshire, founder, in 1918, of the English-Speaking Union, and chairman and former editor of *The Spectator*.

Editor Celebrates 50th Year at National Geographic Helm

"I write in no spirit of jingoism," Sir Evelyn says at the outset, "but in the hope that readers in the American and British commonwealths may derive inspiration from this review of some of the events which have helped to fashion our joint civilization."

Sir Evelyn is a long-time friend of Dr. Gilbert Grosvenor, President of the National Geographic Society, who this spring celebrates 50 years as Editor of the *National Geographic Magazine*.

The Magazine for April contains 48 pages in color. Each color page reproduces an historical painting and is accompanied by a separate page of biographical text, illustrating chief actors and episodes in the evolution of parliamentary institutions, literature, law, chemistry, physics, medicine, exploration, drama, agriculture, and sport.

Winston Churchill and Sir Alexander Fleming are two living Britons represented in these spreads of color portrait and text. Others treated who lived into the 20th century include Queen Victoria, Florence Nightingale, Lord Lister, Cecil Rhodes, Lord Rayleigh, Sir William Ramsay, Lord Rutherford, Sir J. J. Thomson, and Lawrence E. G. Oates.

Treatment Similar to Egyptian, Greek, Roman Issues

In a second article in the issue, Franklin L. Fisher, chief of the Illustrations Division of the National Geographic Society, describes "Our Search for British Paintings" which brought him to the British Isles in mid-1947. He mentions service rendered his mission by Mr. and Mrs. Thomas Garner James, Sir Walter Lamb, Mr. Frank O. Salisbury, Mr. A. A. Thomson, many other individuals, and numerous clubs and galleries.

Completing the all-British issue, which is a counterpart of earlier issues describing Egyptian, Greek, and Roman contributions to modern civilization, is a decorative wall map of the British Isles. Printed in 10 colors on a 26½-inch by 32½-inch sheet folded into the issue, it portrays the isles on the generous scale of 28.2 miles to one inch.

It is primarily a travelers' map, the text explains, but students of literature or history will find many useful border cartouches, and symbols

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Western Australia, and Northern Territory meet, has described them as "living probably the most primitive existence on earth today." The new rocket corridor passes directly through their reservation.

For generations the aborigines have wrested a living from sand hills which, to civilized people, seem utterly uninhabitable (illustration, below). Wearing no clothes, though temperatures range from 15 to 120 degrees Fahrenheit, they use five simple implements to aid their bare hands. Large white wood grubs, honey ants, lizards, kangaroos, emus, grasses, and seeds form their diet.

For scientists and other rare travelers on Australia's vast desert lands, descendants of camels brought to the continent in 1866 provide the transportation.

NOTE: South Australia may be located on the Society's map of Australia.

For additional information, see "An Arnhem Land Adventure," in the *National Geographic Magazine* for March, 1948; "Earth's Most Primitive People," January, 1946 *; "Beyond Australia's Cities," December, 1936; and "Capital Cities of Australia," December, 1935.

See also, in the GEOGRAPHIC SCHOOL BULLETINS, April 4, 1949, "New South Wales Shows the Way in Australia"; and "Arnhem Land Expedition Reports Progress," October 4, 1948.

CHARLES P. MOUNTFORD

WITH SPEAR AND SPEAR THROWER THE ABORIGINE STALKS AND KILLS THE SWIFT KANGAROO

Naked, and with only five implements to aid his bare hands, this primitive Australian lives well in an area where white men can exist only when traveling in an expedition fully equipped with food, water, and protective clothing. His fellow tribesmen will soon be enjoying a feast of roasted kangaroo and his skinny dog will get the scraps.

"R" Means Nothing to Refrigerated Oyster

THERE is no R in May but if you want oysters, go ahead and eat them. That is, unless you live in Maryland, where it is illegal to have an oyster in your possession after April 20.

The erroneous idea that this salt-water delicacy becomes poisonous or otherwise inedible from May through August (the R-less months) originated more than a century ago when settlement began reaching far inland from the Atlantic coast.

Inlanders feared, and often rightly so, that oysters would spoil on the long, unrefrigerated, hot-weather trip from sea to tartar sauce.

Indians Enjoyed Them

However, the practice of granting a summer holiday to the oyster is still a good idea. It gives the tasty mollusk a chance to reproduce itself, thus assuring plenty of stew for years to come. Oystermen refrain from dragging the bivalves to the surface during their spawning season—not from tender-heartedness, but from a cold business sense. Also, they say the oysters are not quite as tasty during that period. But there is no harm at all in taking last season's blue points from a deep-freeze unit and enjoying their succulence in midsummer.

The appetite for oysters in America is older than white civilization. Coastal Indians, undoubtedly eating them the year round, consumed so many that large mounds of the discarded shells remain. Shell mounds in the Popes Creek region of Maryland's Chesapeake Bay stand 15 feet high and cover 30 acres.

The Algonquians did not eat all their catch fresh. They dried and smoked small supplies to carry inland. Sometimes they bartered smoked oysters to stray settlers hungering for a taste of seafood.

Since the waters of their homelands had sheltered oyster beds for centuries, most Europeans came to America with a ready-made liking for the bivalve. The settlers of Jamestown, Virginia, before founding the first permanent English colony in the New World, anchored their ship in Chesapeake Bay and enjoyed the "very large and delicate" American variety. Thus, in 1607, "the bay" began producing for the white man. It never has been surpassed as the world's leading oyster bar.

National Road Sped Oysters West

In colonial times and for long after the Revolution, oystering ranked first among fishing industries. Oysterhouses were on every street corner in coastal cities and towns. Settlers beyond the Allegheny Mountains indulged their taste to the extent of paying 25 cents for a dozen oysters —pickled. This flavorless, dry brand reached Zanesville, Ohio, in the 1820's after a 20-day journey from Baltimore, Maryland.

After the National Road was built over the mountains to what was then the West, a company called the Oyster Line rolled fresh "fruit of the sea" inland on high, narrow wagons. Oysters were packed in wooden boxes, in alternate layers with ice.

Oyster production has dwindled since its 19th-century heyday. In

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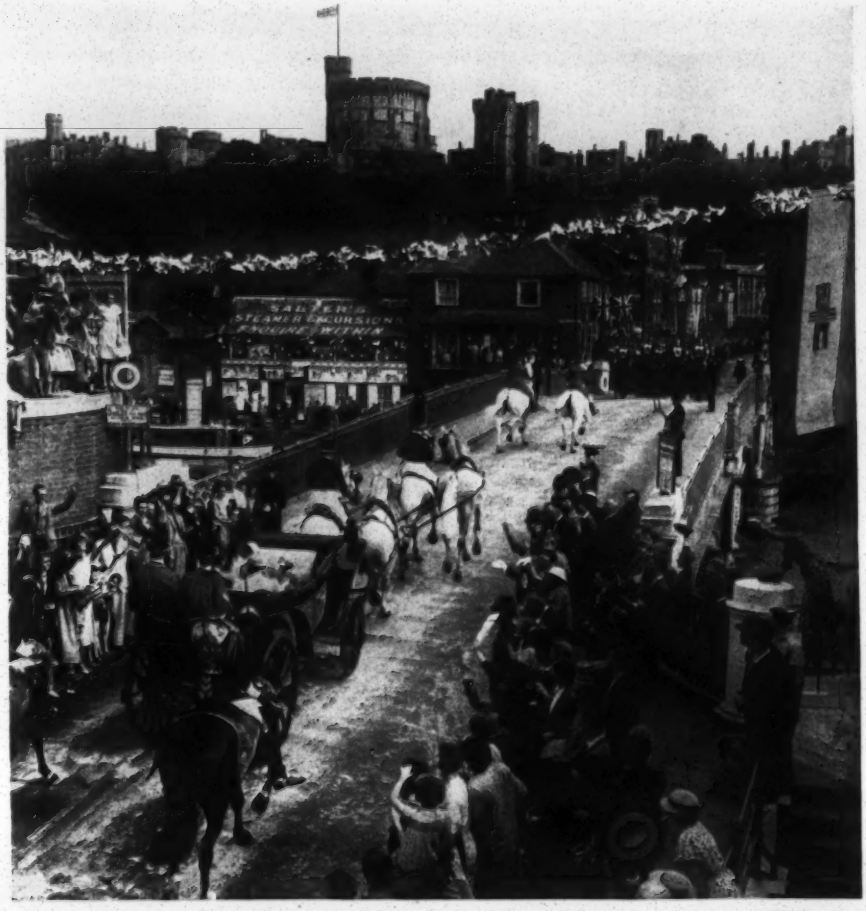
indicating cathedrals, churches, abbeys, castles, and battlefields. The Society's cartographers also included the 77 bases where 2,000,000 Yanks trained between 1942 and 1945. The map extends to the beachheads and battlegrounds of the French invasion coast.

For the benefit of teachers and others who will want this educational material, the Society has reprinted the entire issue (minus advertisements) and made it available in a gray-paper-covered booklet of 132 pages. The map is included in the price of 75¢ in the United States and possessions; 85¢ elsewhere.

NOTE: See also "By Cotswold Lanes to Wold's End," in the *National Geographic Magazine* for May, 1948; "Yanks at Westminster," August, 1946*; "Preservation of England's Scenic and Historic Treasures," April, 1945*; "British Commonwealth of Nations," April, 1943; "Winchester, England's Early Capital," January, 1941*; "Britain Just Before the Storm," August, 1940*; "Time and Tide on the Thames," February, 1939*; "Along London's Coronation Route," May, 1937*; and "As London Toils and Spins," January, 1937.*



PICTURES, INC.

BRITISH PAGEANTRY REACHED A HIGH POINT IN 1937 WHEN NEWLY CROWNED KING GEORGE AND QUEEN ELIZABETH NEARED WINDSOR CASTLE ON THE THAMES

Bulletin No. 5, May 2, 1949

Teddy Roosevelt Park Recalls Wild-West Days

THE buffalo were disappearing and the prong-horned antelope were growing scarce and wary in 1883 when a bespectacled young Easterner dropped off at the frontier post of Little Missouri, in western Dakota Territory, for a camping and hunting trip.

The visitor was Theodore (Teddy) Roosevelt. The hunting trip aroused an interest which led him into the cattle-ranching business. And today the Roosevelt name and exploits from that vanished chapter of American frontier history are scheduled to play a major role in the dedication, June 4, of the Theodore Roosevelt National Memorial Park.

Where Thundering Herds Roamed the Range

The new federal park, for which congress set aside territory in 1947 and 1948, lies along the Little Missouri River in what is now western North Dakota. In two sections, north and south of the old Little Missouri settlement, it covers some 50,000 acres in the starkly eroded, freakishly colorful Badlands of North Dakota (not to be confused with the more-often-visited Badlands of South Dakota).

Thundering buffalo herds still roamed these Badlands not long before Roosevelt went West. Indeed, it was only a few months earlier that the last big herd had been cut to remnants by the "game butchers." Before extinction threatened the big beast, such slaughters made buffalo meat, skins, and robes commonplace in American life and economy.

Much wild game remained, however, in the Little Missouri region. Besides scattered buffalo and antelope, there were plenty of elk, blacktail and whitetail deer, mountain sheep, and beaver, and now and then a bear along the river. Roosevelt shot his first buffalo in this region, and became trail-hardened while hunting over the rugged terrain.

It was still the day of the wild and woolly West, of cattle and horse thieves, of ranchmen versus sheepmen, later stereotyped in hundreds of movie plots. Less than ten years earlier General Custer and his command had come this way on the expedition against the Indians that was to end in the famous last stand at the Little Big Horn.

Many Reminders of Teddy

When Roosevelt knew Little Missouri and the rising boom town of Medora across the river, conventional law and order were yet to come. Men were quick on the trigger and "necktie parties" ended many a rustling adventure. The future president of the United States himself went in for personal law enforcement when, with a couple of his men, he trailed, captured, and took to a distant jail three desperadoes who had stolen an essential ranch boat.

Visitors to the region find only fragments of the Little Missouri post and of the log houses at Roosevelt's Maltese Cross and Elkhorn ranches. But the Badlands are the same, with their weird-shaped, multi-colored buttes, sagebrush plains, grassy bottom lands, petrified forest, and the spectacular Grand Canyon of the Little Missouri River.

A monument to honor Theodore Roosevelt at Medora has been ap-

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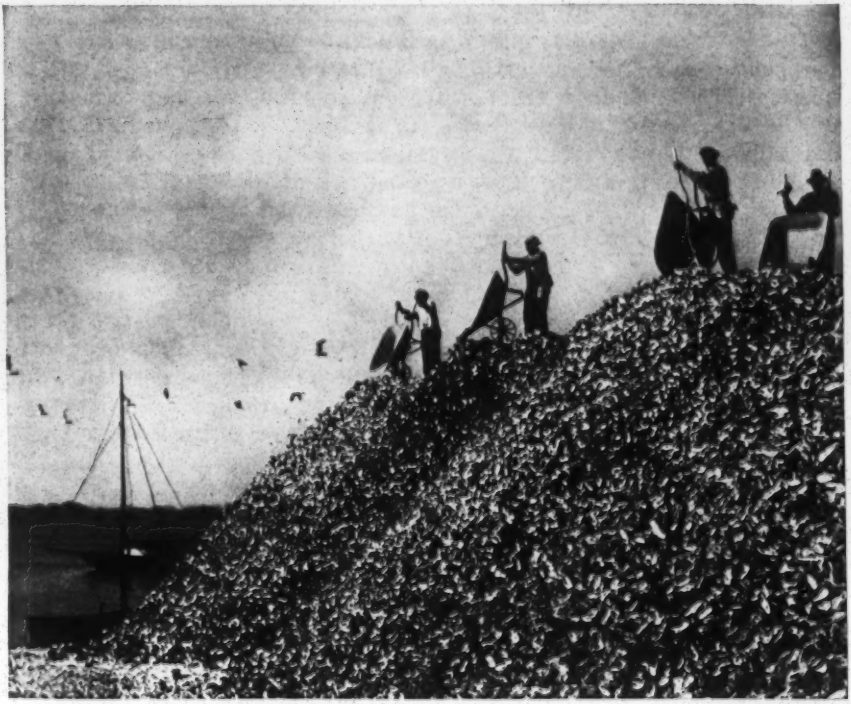
one year during the 1890's Chesapeake Bay alone gave up 17,000,000 bushels, equal to today's total domestic output. Wonderment at how the less-populous United States consumed so many oysters in those days is partly answered by the fact that there simply was overproduction and waste. Colonial Americans even used oysters for fertilizer and fuel.

The Chesapeake has never recovered from its reckless era, even though the two bay states—Maryland and Virginia—still produce almost half the country's oyster supply. A comeback has been made in recent years by proper conservation, intelligent legislation, and more scientific "farming" methods. Also, highly productive beds have been planted on the Gulf (illustration, below) and Pacific coasts.



J. BAYLOR ROBERTS

SHELL MOUNDS RISE BY THE WHEELBARROW LOAD BEHIND A CANNERY AT BILOXI, MISSISSIPPI

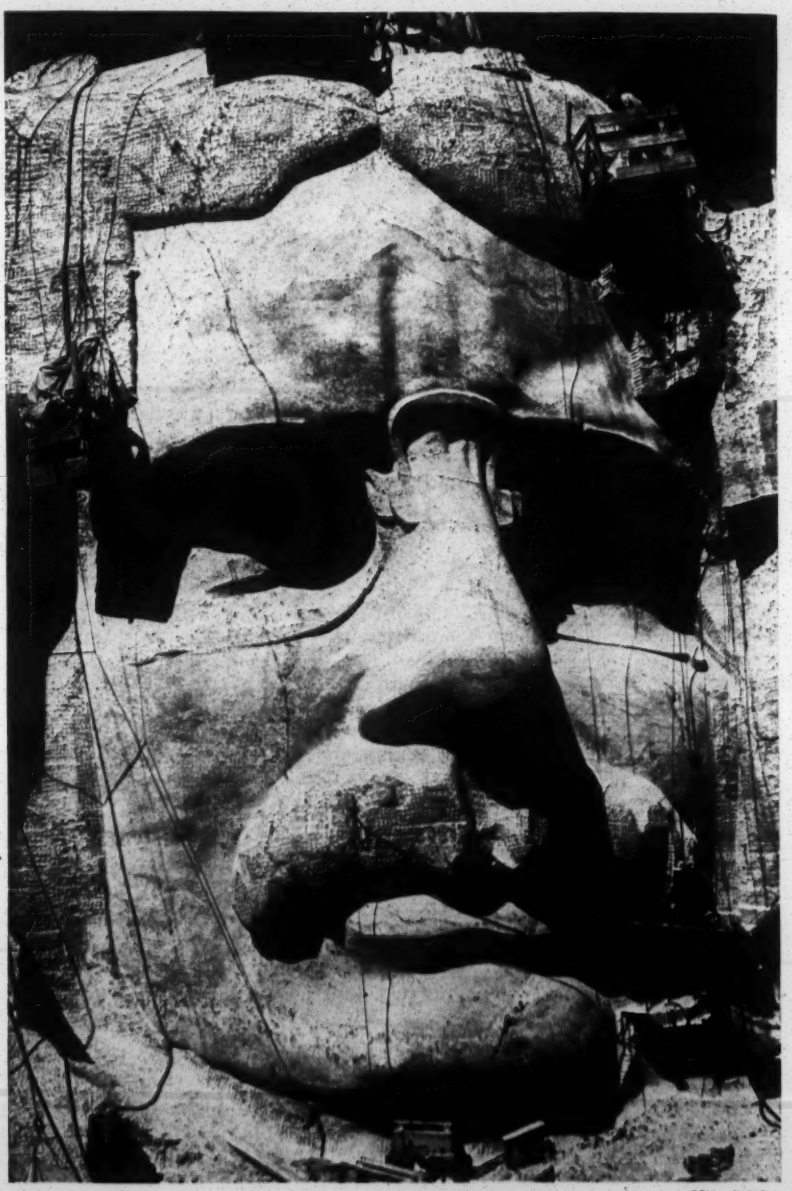
This Gulf of Mexico port is one of the leaders in the country in oyster canning. Many shells are returned to the underwater reefs whence they came to create beds for the breeding of new oysters. Others are ground up for poultry grit. Formerly, local roads were surfaced with the husks.

Highest and Lowest Continental Altitudes

Continents	*Highest Point*	*Elevation (Feet)*	*Lowest Point*	*Below Sea Level (Feet)*
Asia	Mount Everest	29,002	Dead Sea	1,286
South America	Mount Aconcagua	22,835	Sea Level	
North America	Mount McKinley	20,300	Death Valley	280
Africa	Mount Kibo, Kilimanjaro	19,587	Libian Desert	436
Europe	Mount Elbrus	18,481	Caspian Sea	85
Antarctica	Mount Markham, highest named peak	15,100	Unknown	
Australia	Mount Kosciusko	7,305	Lake Eyre	39

proved by congress. Another reminder of his connection with the Dakotas is the Mount Rushmore National Memorial in South Dakota's Black Hills (below).

NOTE: Medora, the Little Missouri River, and the North Dakota Badlands may be located on the Society's map of North Central United States.



BELL PHOTO

COMPLETE WITH GIGANTIC PINCE-NEZ AND MOUSTACHE, THEODORE ROOSEVELT'S FEATURES, NOW FINISHED, PEER FROM DAKOTA GRANITE